



InfoSight Corporation
"We BARCODE Difficult Stuff"™



OPERATION AND MAINTENANCE MANUAL

Customer: _____

End User: _____

Customer P.O.: _____

Job No.: _____

Serial Number: _____

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Chapter 1

System Startup

1.1 Unpacking

Remove the printer from the box. Place printer on a table or stand that will hold approximately 200 lb(Printer 152 lb. + roll of tags). Plug printer into wall outlet, with the proper operating voltage.

1.2 Terminal

An Esprit 5000 terminal and communication cable are supplied with the QUALITAG® printer. Connect the cable from the db25 connector on the back of the terminal labeled MAIN to the db25 connector on the QUALITAG® printer labeled TERMINAL. Terminals are set at the factory and should not have to be changed. If you do have to change parameters do the following. To enter the terminal's settings screen press F3 during power up. The terminal settings should be. After making changes to parameters, go to System, then save and then press y for yes to save changes. To exit set-up press ALT(ESC).

Emulation	VT220
Keyboard Type	PC-102/105
Main Port Speed	19200
Data Width	8
Parity	None
Stop	1
Transmit Flow Control	X-OFF X-ON /XPC
Receive Flow Control	X-OFF X-ON /XPC
Host Interface	RS232

1.3 Environment

The QUALITAG® printer is to be placed in a temperature controlled or covered area. This is a 2-step thermal transfer process and will not work well in extremely dusty places.

Chapter 2

Installing ribbons, films and tags

2.1 Ribbon installation

For better access the heater box assembly can be dropped down. To do this pull the solenoid latch up and out which will allow the heater box to drop down. To remove or install the ribbon, the print head must be released from the pinch roller. This is done by turning the head lift knob (green knob) counter clockwise as far as it will turn which moves the head back away from the pinch roll. The dancer arm must also be unlatched to load the ribbon. To do this turn the dancer arm latch clockwise and pull out. This will allow the dancer arm to pivot off of the two roller shafts. Refer to loading diagram, on the inside door of QUALITAG® printer, this shows the proper routing of the ribbon.

Remove the old ribbon supply roll and the old ribbon take-up roll. If the machine is setup for 3" wide tag stock make sure the 1/2" wide plastic spacer is on both the ribbon take-up spindle and the ribbon supply spindle. Put new take-up cardboard core, which comes with new ribbon, on the ribbon take-up spindle. Put new ribbon supply roll on ribbon supply spindle with ribbon coming off the top and to the right so it unwinds turning clockwise. Feed ribbon down thru the print head, head must be released as described above. Then feed ribbon so it passes to the left of the top dancer roll, and to the right of the bottom roll, then under the bottom roll. Then feed it up to the top of the ribbon take-up roll so it winds up turning counter clockwise. Turn the ribbon take up reel a couple of times to remove the wrinkles in the ribbon. Move the dancer arm up so the end of the two roller shafts engage the bearings in the arm. Push the dancer latch in and turn counter clockwise to lock it. While lightly pushing the printhead in towards the pinch roll, turn the head lift knob clockwise until it stops. This will move the printhead against the pinch roll. If you are loading the scavenger roll at the same time wait until it is loaded before closing the head. Raise the heater box and push the solenoid latch in and down to lock the heater box in the raised position.

2.2 Scavenger film installation

If the printhead hasn't been released while loading ribbon do so. This is done by turning the head lift knob (green knob) counter clockwise as far as it will turn which moves the head back away from the pinch roll. On the scavenger take up roll, remove the pin by pulling it toward you. Then pull off the used film. Remove the old core from the scavenger supply post.

Place the new scavenger film roll on the scavenger supply post with the film coming off of the top to the right so it unwinds when roll is turned clockwise. Note that there is a green retainer on the post. This should be slid in until it is close to the side of new roll of film but there is still a small gap so the roll can turn easily. The film is then fed down past the printhead, around roller at bottom then back toward the back of the machine under the film switch roller and then feed up to the top of scavenger take-up reel from the right so it will wind up when turned counter clockwise. Make about 2 turns of film around the reel. Then place the pin back onto the reel by aligning it with the notches in the reel and pushing it in until it is about a 1/4" (6.3mm) from all the way in. If it is pushed all the way in it is hard to remove the next time. While lightly pushing the printhead in towards the pinch roll, turn the head lift knob clockwise until it stops. This will move the printhead against the pinch roll.

2.3 Tag stock

The tag stock goes on the reel on the back of the printer. There is a tag keeper to hold the tags onto the reel. On it you will find a pin to lock it in place. Lift the pin and turn the pin 90 degrees. Remove the bar. Open box of tags and place them on the reel so that it unreels when turned clockwise. The white tag surface should be up. Feed the tag stock into the tag entrance until you feel it touch the feeder roll. Put the tag keeper back on the tag reel and turn the pin 90 degrees to lock it into place.

Chapter 3

Sequence Of Operations

3.1 Power Up

If using terminal power it up before powering up printer or the screen may not paint. The power switch is located on the back panel beside the a.c. jack. Turn on the printer. At this time the lights on the front panel should all light up momentarily. Insert tag stock into tag entrance. Push the tag stock toward the front of the printer until you feel it touch the feed roller. Push and release the tag feed buttons (both feed in and feed out) until you see the tag stock at the break off point in the front of the machine. Then push the online button.

At this point the online light should be flashing. This indicates that the printer is warming up. This should take approximately 10 minutes depending on the room temperature. Note: Although the printer will print after 10 minutes, tag quality may not be the best quality. The printer should be allowed to warm up for 2 hours before beginning to run production tags to allow all parts of the printer to reach operating temperature. It is recommended after installation that printer be turned on and left on to insure best quality tags. When the printer is warm enough to print it will beep 2 times, the online light will stop flashing, and the tag stock will advance 2 or 3 tag lengths. The printer is now ready to print.

3.2 Printing a tag

If a tag layout has not been loaded refer to Chapter 6 for a brief description on how to enter a tag layout. For more detail information refer to the Software Manual.

3.2.1 Printing from Terminal

3.2.1.1 Printing from the main screen

The main screen is the factory default screen. The main screen contains pull down menus for setup and tag editing. This screen will come on when the printer is powered on, if the main screen is selected under setup/screens menu. Refer to the software manual on how to select screens.

The main screen can be customized to contain operator entered fields. (This is done by the supervisor, under **setup/operator** refer to software manual for details). At each prompt the operator types in the required data and pushes enter or return. Also enters the Qty(quantity) of tags to be printed and then pushes print pushbutton on the front panel of the printer to start a printing cycle. You can also print a tag from the terminal by pressing a CTRL-P to get to the Printer menu and then choosing Print Tag.

3.2.1.2 Printing from the operator screen

The operator screen is setup by the supervisor to contain only fields of data to be entered by the operator. Once the operator enters the data and the quantity that he wants to print he simply pushes the print pushbutton on the front of the printer.

3.2.2 Printing from Host

The data, tag layout and start print command can all be downloaded serially thru the db25 connector marked Host on the back of the marker. Refer to the software manual for more information on how to use the host download.

Chapter 4

Front Panel controls

	□	Print
	□	Error
	□	Online
Feed out	□	Tag Feed
Feed In	□	

4.1 *Pushbutton Operation*

Print

The Print lighted pushbutton is used to print a tag after data is entered by operator, when used in stand alone operation. Holding print pushbutton in for 3 seconds will cause the printer to print a test tag.

Error

The Error is an indicator only and will not reset any errors. It only indicates when there is an error.

Online

Online lighted pushbutton is used to put the printer online and to take it offline. If it is pushed and printer is not up to operating temperature it will flash. When light is on steady marker is on line.

Feed Out

Feed out is used to jog tag stock out of the printer.

Feed In

Feed in is used to jog tag stock back into printer, or to unload tag stock

Tag Feed

Tag feed is done by pushing both feed in and feed out at the same time and holding until the tag starts to move then releasing them both.

4.2 Front panel lights

Print

If the Print light is flashing slowly it indicates that the tag which is to be printed is heating. To minimize reheating you should remove any tags once they are printed. If the light is flashing fast then it means that there is a tag at the break off point for the operator to break off. Once the tag is broken off then light will go off.

Error

This light indicates that there is an error. Look on the main screen in the status box to see what the error is or some errors cannot be displayed so listen to beep code and flashing code to determine error. A chart of the Beep and Flash code is on the load diagram inside the door of the printer. A list of the codes is also shown below.

Online

If the online light is on and not flashing, the printer is ready to print. If the online light is flashing the Printer is heating up and once it reaches temperature will feed 1, 2 or 3 tags depending on configuration of tag. This should also show on the main screen under mode: HEATING

Feed in and out

The feed lights only light when these buttons are pushed and output to jog stepper motor is on.

4.3 Beep Codes

The QUALITAG® Printer will beep to let you know what is happening. Below is a table of the beep codes.

<u># Beeps</u>	<u>Meaning</u>	
2	Online	
3	Door Open	
4	Microcom Error	
5	Out of Tag Stock	
6	Notch Error	
7	Heater Error	V1.6 or newer
8	Mylar Error	V1.6 or newer

Chapter 5

Trouble Shooting

5.1 Status

Status on the main screen will display several problems that will assist you in trouble shooting the printer. They are as follows:

Ready	Printer is ready to print.
Head is up	This indicates that the printer head is not in the down position. Turn head lift knob counter clockwise. Push down on the head and turn the head lift knob clockwise.
Ribbon Broken	A: This indicates that the ribbon on the printer is broken. Reinstall ribbon to correct this problem. B: This may also be caused if ribbon sensor switch is not closed. See drawing on inside door of printer.
Take-up full	This indicates that the scavenger reel is full. Pull the pin on the take-up roll, then take off the scavenger film and dispose of it.
Mylar Empty	This indicates that the scavenger film is empty or there is slack in the film and the switch is not being made.

5.2 Printing problems

Problem

Tags are blank

Online light will not light

Solution

Check printer ribbon refer to door drawing, make sure ribbon is threaded properly.

Check status box on main screen.

No display on terminal

check configuration
on terminal. 19200
baud ,no parity ,
8 data bits ,1 stop
bit , VT220
Check serial cable.

Line on tag (angled)

This could be caused by a wrinkle in the scavenger film or the ribbon. Check both to see which is wrinkled. Lift head Using the head lift knob and turn the wrinkled film several turns to remove wrinkle. If wrinkling of the scavenger film continues clean rubber pinch roll of any build up.

Line on tag (straight)

This indicates that the print head has a dirty spot on it, and you need to clean the print head.

5.3 Regular Servicing

- 1 The print head should be cleaned at least once a day or if ribbon breaks.
- 2 Filters **ITM 10871** on back of printer should be replaced once a month.
- 3 Inside of printer should be kept dust free.
- 4 Microcom printer needs clutches after 1 million inches. This is approximately 166,000 of 6 inch tags.

5.4 Cleaning the print head

Open the door to the QUALITAG® printer. Remove the used ribbon core from the ribbon take up wheel. Turn the head lift knob counter clockwise as far as it will go. Swing head up. There are 2 options at this point.

A: Use a cleaning pen **ITM 14123** and swipe the head where it touches the ribbon until the head is clean.

B: Use a Cleaning card **ITM 14124**. Turn off the QUALITAG® printer, unload the ribbon and scavenger film. Open the dancer latch and solenoid latch (see chapter 2). Open the cleaning card and remove it from it's package. Insert the card behind the head where the films usually are. Leave enough sticking out so that you can pull it out. Push the head down and turn the head lift clockwise, then pull the card out of the printer. Reinstall ribbon and scavenger film.(see chapter 2) Restart printer.

Chapter 6

Tag layout

6.1 Sample layout

Layout

1,310,200,12,41,1,3,2,175,8,,1,
1,100,200,8,1,8,3,2,3,3,0,1,
2,550,300,32,1,6,3,2,1,1,0,1,

text

1: 49311932
2: INFOSIGHT CORP. (888)642-3600

6.2 Laying out a tag

To layout a tag you need to be in the supervisor mode. To get into the supervisor mode from the **Main Screen**, you push **CTRL-G** to get to the **GENERAL MENU**, **CTRL-U** selects Supervisor Mode, then enter the proper password. You are now in the supervisor mode. You will now see that the **u** In Setup is highlighted. Push **CTRL-U**, takes you to Setup menu, **CTRL-T**, takes you to the **Tag Layout Screen**.

You will Now see **Buffer Number** : [] In this box is the buffer that you wish to edit. If it is not the layout you want to edit enter the proper number in the box (1-5). In the Layout box are lines of data telling the printer where and how you want the information on the tag. If they are blank push **CTRL-A** to Add a line. This will bring up the **Layout field edit screen**. If there are lines of data in the layout box, choose the line you want to change, using the arrow keys then push enter 2 times.

You will see a list of fields that need to be entered at this point. They are as follows.

Text String Number	TSN:	[]	Refers to string in text box
X Beginning Coordinate	XB:	[]	Dots from left side of tag(203 per inch)
Y Beginning Coordinate	YB:	[]	Dots from bottom of tag(203 per inch)
Character Count	CC:	[]	Characters in string
Text Conversion Identifier	TCI:	[]	What data goes with this string, barcode or text. Use onscreen help to choose what you want.
Character Generator Number	CGN:	[]	Use to select font and barcode ratio
Field Orientation	FO:	[]	What direction, use on screen help
Field Justification	FJ:	[]	Justification for each field, use onscreen help
Character Multiplier X	CMX:	[]	Makes data larger in x direction
Character Multiplier Y	CMY:	[]	Makes data larger in y direction
Character spacing	CS:	[]	Sets spacing between characters
Text starting Position	TSP:	[]	Starting position in string
Attribute number	AN:	[]	Fixed spacing and reverses text

Left side



bottom

Tag layout continued

In the sample layout 6.1 there are 2 lines of text and 3 lines of layout fields. In the first line of the layout field it tells the printer that it is to do the following.

1	Refers to text string #1 (49311932)
310	Tells it to put the text 310 dots from the left side of the tag
200	Tells it to put the text 200 dots from the bottom of the tag
12	Is the number of characters it is to print
41	Tells it that it is a 128 barcode (use onscreen help)
1	Chooses barcode ratio
3	Tells it to turn the barcode 270 deg.
2	Tells it to justify below the baseline
175	Multiply barcode 175 times in the x dimension
8	Multiply the barcode 8 times in the y dimension
,	If there is no number between the commas then the default value is used.
1	Start with the first character in the string, 2 would be second etc...
0	Tells it to print proportional 2 would be nonproportional(not shown on layout screen).

The second line in the layout tells the printer to do the following:

1	Refers to text string #1 (49311932)
100	Tells it to put the text 100 dots from the left side of the tag
200	Tells it to put the text 200 dots from the bottom of the tag
8	Is the number of characters it is to print
1	Tells it that it is a embedded font
8	Chooses 18 point arial font
3	Tells it to turn the barcode 270 deg.
2	Tells it to justify below the baseline
3	Multiply font 3 times in the x dimension
3	Multiply the font 3 times in the y dimension
0	Character spacing
1	Start with the first character in the string 2 would be second etc...
0	Tells it to print proportional 2 would be nonproportional(not shown on layout screen).

The third line in the layout tells the printer to do the following

2	Refers to text string #2 (INFOSIGHT CORP. (888)642 3600)
550	Tells it to put the text 100 dots from the left side of the tag
300	Tells it to put the text 200 dots from the bottom of the tag
32	Is the number of characters it is to print
1	Tells it that it is a embedded font
6	Chooses 12 point arial font
3	Tells it to turn the font 270 deg.
2	Tells it to justify below the baseline
1	Multiply font 1 times in the x dimension
1	Multiply the font 1 times in the y dimension
0	Character spacing
1	Start with the first character in the string 2 would be second etc...
0	Tells it to print proportional 2 would be nonproportional(not shown on layout screen).

The Text Box shows what data is in each string. The sample is as follows.

THESE 2 LINES ARE REFEREED TO BY THE LAYOUT FIELDS

1:	4931132
2:	INFOSIGHT CORP. (888)642-3600

In any of the text fields you can enter a flag to enter data automatically or call for an operator entered field. Flag help is at the bottom of the screen PUSH **CTRL-G** for Flag Help. Refer to the software manual for more details on how to layout tags.

6.3 Graphics

Graphics can also be inserted onto a tag. There is a utility to convert a BMP file into a file that the QUALITAG® printer can use. The utility tells the printer what slot to store the graphic in. In the TCI you would insert an 8. That tells the printer that it is a graphic and the CGN would have the slot number where the graphic is stored. The utility is BMP2MIC, it is a DOS program and is available upon request.

APPENDIX A

Cables

Host Cable

<u>QUALITAG® DB25</u>	<u>PC DB25</u>
2 TXD -----	RXD 3
3 RXD -----	TXD 2
6 DSR -----	DTR 20
20 DTR -----	DSR 6
4 RTS -----	CTS 5
5 CTS -----	RTS 4
7 GND -----	GND 7

Terminal cable

2 TXD -----	RXD 3
3 RXD -----	TXD 2
7 GND -----	GND 7

Terminal Setup

Emulation	VT220
Keyboard Type	PC-102/105
Main Port Speed	19200
Data Width	8
Parity	None
Stop	1
Transmit Flow Control	X-OFF X-ON /XPC
Receive Flow Control	X-OFF X-ON /XPC
Host Interface	RS232

Spares List

ITM 10871 FILTER (5 Pack)
ITM 14123 PRINTHEAD CLEANING PEN
ITM 14124 PRINTHEAD CLEANING PAD
ITM 17330 RESIN(RIBBON 3 (INCH)
ITM 14105 SCAVENGER FILM
ITM 13093 28V BULB (FOR FRONT PANEL)
ITM 16520 Small Clutch
ITM16521 Large Clutch
ITM16518 Outer Bearing
ITM16519 Inner Bearing